REMARKS

The present application was filed on November 21, 2003 with claims 1 through 20. Claims 1 through 20 are presently pending in the above-identified patent application. The claims are not amended herein.

In the Office Action, the Examiner rejected claims 1-20 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Examiner asserts that the Specification does not address "how the (shutter) medium is attached and how the medium behaves when it is allowing or inhibiting the magnetic flux of the write coil." The Examiner further asserts that the "descriptions are insufficient for one of ordinary skill in the art to understand how is this 'shutter' working in the head in order to selectively allow the magnetic field to alter this magnetic domain."

Applicants do not allege to have invented a shutter system. In fact, shutters were well known to those of ordinary skill in the art at the time the present application was filed. Rather, the present invention is directed to selectively altering the magnetic domain of a magnetic storage material 150 by controlling the path of a magnetic field 120 *using* one or more shutters 200. In this regard, the present specification teaches:

> In an open position of the shutter 200, the magnetic field 120 is allowed to pass the shutter 200 and will follow an outer loop 130 comprised of magnetic material segments 132, 134, 136 and the magnetic storage material 150. In a closed position of the shutter 200, the magnetic field 120 is not allowed to pass the shutter 200 and will follow an inner loop 140 that bypasses the disk 150 and is comprised of magnetic material segments 132, 134, 136 and 138. In this manner, the magnetic domain of the magnetic storage medium 150 is selectively altered based on the position of the shutter 200.

Original Specification, at page 3, lines 18-24.

FIG. 2, and the corresponding text on page 4 of the specification, illustrate an exemplary shutter array 200. In this regard, the present specification teaches how the shutter array is *constructed* and how it *operates*:

> As shown in FIG. 2, each shutter element 210 can *pivot across a central axis* between an open (not shown) and closed position (shown), in a *similar manner to a venetian blind.* The position of each shutter element 210 can be *controlled*, for example, *using micro electro mechanical systems (MEMS) or other micromachine control elements.* It is noted that micro electro mechanical systems switches are **increasingly used** for optical networks and other applications. In an optical network application, MEMS switches have been employed, for example, to move a mirror that changes the propagation direction of light, or blocks the light entirely. United States Patent Number 5,974,207, for example, discloses a wavelength-selective add-drop multiplexer that uses movable mirrors to add and/or drop spectral components from a wavelength-division-multiplexed optical signal. *Magnetic shielding may be implemented using Nickel (Ni) metallization or Cobalt (Co) deposition on the shutter mechanisms 210.* In this manner, when the shutter elements 210 are in a closed position, the magnetic field will be reflected to the inner loop 140.

Original Specification, at page 4, lines 3-15 (emphasis added).

Shutter Operation (Behavior)

As indicated in the above passage, MEMS devices were well known and already frequently used for other applications at the time of the filing of the present application. United States Patent Number 5,974,207 describes using a MEMS-based actuator to move an optical device, such as a mirror, into, and out of, the path of an optical signal.

Thus, contrary to the assertion of the Examiner, the present specification gives clear guidance on how the shutters behave. In the above-described exemplary embodiment, the shutters are mounted in an array, such that they can pivot across a central axis between an open and closed position. The pivoting is controlled using MEMS devices which were very well known to those of ordinary skill in the art at the time of filing, as evidenced by U.S. Patent No. 5,974,207 which was cited in the original filing.

Shutter Construction (Shutter Attachment)

Again, in the above-described exemplary embodiment, the shutters are fabricated in an array, such that they can pivot across a central axis between an open and closed position.

Such a configuration was very well known to those of ordinary skill in the art at the time of filing. The pivoting arrangement indicates how the shutters are *attached.*

With regard to the *composition* of the shutters themselves, the original specification teaches that the shutters can be coated with a magnetic shielding, such as Nickel or Cobalt. See page 4, lines 12-13. See also, claims 7-9.

Conclusion

Applicants submit that the claimed subject matter is described in the original specification in such a way as to enable a person of ordinary skill in the art to make and use the invention *without undue experimentation.*

All of the pending claims, i.e., claims 1-20, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,

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